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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,036	01/23/2004	David M. Pepper	B-3915 617817-8	7963

36716 7590 03/10/2006

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EXAMINER	
TURNER, SAMUEL A	

ART UNIT	PAPER NUMBER
2877	

DATE MAILED: 03/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/764,036	PEPPER, DAVID M.
	Examiner	Art Unit
	Samuel A. Turner	2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 23 January 2004.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-36 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-36 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 1/23/04.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-18, 23, 25-27, 29, and 31-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claims 1, 10, 25, and 34; the phrase "at least one beam between the first beam and the second beam" is confusing in that there appears to be a third beam claimed, the "**at least one beam**". The phrase --at least one of the first and the second beams-- would definitely claim modulating one of the first and second beams.

With regard to claim 9, the phrase "at least one frequency between the first frequency, the second frequency and the modulator frequency is a tunable frequency" is confusing in that there appears to be a fourth frequency claimed, the "**at least one frequency**". The phrase --at least one of the first frequency, the second frequency, and the modulator frequency is a tunable frequency-- would definitely claim that at least one of the frequencies is tunable.

With regard to claims 14, 23, 26, 29, and 35; the phrase "a sample whose spectral properties have to be detected" is confusing. Why does the samples a

spectral properties have to be detected ? Does this distinguish from a sample whose spectral properties are to be detected ?

With regard to claim 31, the phrase "an intermediate frequency inferior to the first frequency and the second frequency" is indefinite. What is "inferior" about the intermediate frequency ? Is this a difference frequency or a beat frequency or some other frequency ?

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 6-8, 10, 15-19, 24, 25, 27, 28, 30, and 34 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Mueller et al(2002/0036814). The rejected claims are not limited to any spectral measurement.

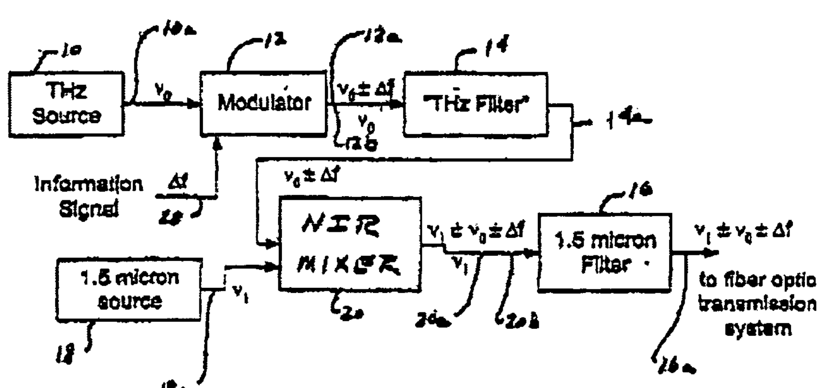

FIG. 1 A

With regard to claim 1, Mueller et al teach an apparatus comprising:

a first laser, emitting a first beam having a first frequency(**10, paragraph [0023]**);

a second laser, emitting a second beam having a second frequency(**18, paragraph [0019]**), the difference between the first frequency and the second frequency being in a Terahertz range(**paragraphs [0019] and [0023]**);

a mixer, located downstream of the first laser and the second laser, the mixer producing a mixed signal(**20, paragraph [0019]**); and

a modulator modulating at least one beam between the first beam and the second beam(**12, paragraph [0024]**).

As to claim 2, wherein the mixed signal has a frequency spectrum comprising a carrier component and at least two sideband components, the carrier component centered at a Terahertz frequency($v_1 \pm v_0 \pm \Delta f$).

As to claim 3, wherein the carrier component has a frequency displacement from the sideband components depending on the modulation of the at least one beam($v_1 \pm v_0 \pm \underline{\Delta f}$).

As to claim 6, wherein the modulator is located upstream of the mixer(**figure 1**).

As to claim 7, wherein the modulator performs frequency modulation of the at least one beam(**at Δf**).

As to claim 8, wherein the modulator performs amplitude modulation of the at least one beam(**12, paragraph** [0024]).

With regard to claim 10, Mueller et al teach an apparatus comprising:

a first laser, emitting a first beam having a first frequency(**10, paragraph** [0023]);

a second laser, emitting a second beam having a second frequency(**18, paragraph** [0019]), the difference between the first frequency and the second frequency being in a Terahertz range(**paragraphs** [0019] **and** [0023]);

a frequency modulator, having a modulation frequency, for frequency modulating one beam between the first beam and the second beam(**12, paragraph** [0024]); and

a mixer, having as an input the frequency modulated one beam and the other beam and outputting a mixed signal(**20, paragraph** [0019]).

As to claim 15, wherein the mixed signal has a frequency spectrum comprising sidebands, the sidebands comprising information to be transmitted to a remote location($v_1 \pm v_0 \pm \Delta f$).

As to claim 16, wherein the first laser and the second laser are narrowband lasers(**paragraphs** [0019] **and** [0023]).

As to claim 17, wherein the first laser and the second laser have a frequency band in a range of about 1 KHz to about 10 MHz(**paragraphs** [0019] **and** [0023], **typical with narrow band lasers**).

As to claim 18, wherein the first laser and the second laser are chosen from a group comprising laser diodes, fiber lasers, and diode-pumped solid state lasers(**paragraphs [0023] and [0048]**).

With regard to claim 19, Mueller et al teach an apparatus comprising:

a first laser, emitting a first beam having a first frequency(18, **paragraph [0019]**);

a second laser, emitting a second frequency modulated beam having a carrier frequency and a modulation frequency(10,12; **paragraph [0019]**), the difference between the first frequency and the carrier frequency being in a Terahertz range(**paragraphs [0019] and [0023]**); and

a mixer, having as an input the first beam and the second frequency modulated beam and outputting a mixed signal(20, **paragraph [0019]**).

As to claim 24, wherein the mixed signal has a frequency spectrum comprising sidebands, the sidebands comprising information to be transmitted to a remote location($v_1 \pm v_0 \pm \Delta f$).

With regard to claim 25, Mueller et al teach an apparatus comprising:

a first laser, emitting a first beam having a first frequency(10, **paragraph [0023]**);

a second laser, emitting a second beam having a second frequency(18, **paragraph [0019]**), the difference between the first frequency and the second frequency being in a Terahertz range(**paragraphs [0019] and [0023]**);

a modulator, for modulating in amplitude one beam between the first beam and the second beam(**12, paragraph** [0024]); and

a mixer, having as an input the amplitude modulated one beam and the other beam and outputting a mixed signal(20, **paragraph** [0019]).

As to claim 27, wherein the mixed signal has a frequency spectrum comprising sidebands, the sidebands comprising information to be transmitted to a remote location($v_1 \pm v_0 \pm \Delta f$).

With regard to claim 28, Mueller et al teach an apparatus comprising:

a first laser, emitting a first beam having a first frequency(18, **paragraph** [0019]);

a second laser, emitting a second amplitude modulated beam having a carrier frequency(10,12; **paragraph** [0019]), the difference between the first frequency and the carrier frequency being in a Terahertz domain(**paragraphs** [0019] **and** [0023]); and

a mixer, having as an input the first beam and the second amplitude modulated beam and outputting a mixed signal(20, **paragraph** [0019]).

As to claim 30, wherein the mixed signal has a frequency spectrum comprising sidebands, the sidebands comprising information to be transmitted to a remote location($v_1 \pm v_0 \pm \Delta f$).

With regard to claim 34, Mueller et al teach a method comprising:

providing a first laser beam having a first frequency(10, **paragraph** [0023]);

providing a second laser beam having a second frequency(18, **paragraph** [0019]), the difference between the first frequency and the second frequency being a Terahertz frequency(**paragraphs** [0019] **and** [0023]);

modulating at least one beam between the first beam and the second beam(12, **paragraph** [0024]); and

mixing the first beam and the second beam to generate a mixed signal(20, **paragraph** [0019]).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3, 6-30, and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kido et al(6,873,405).

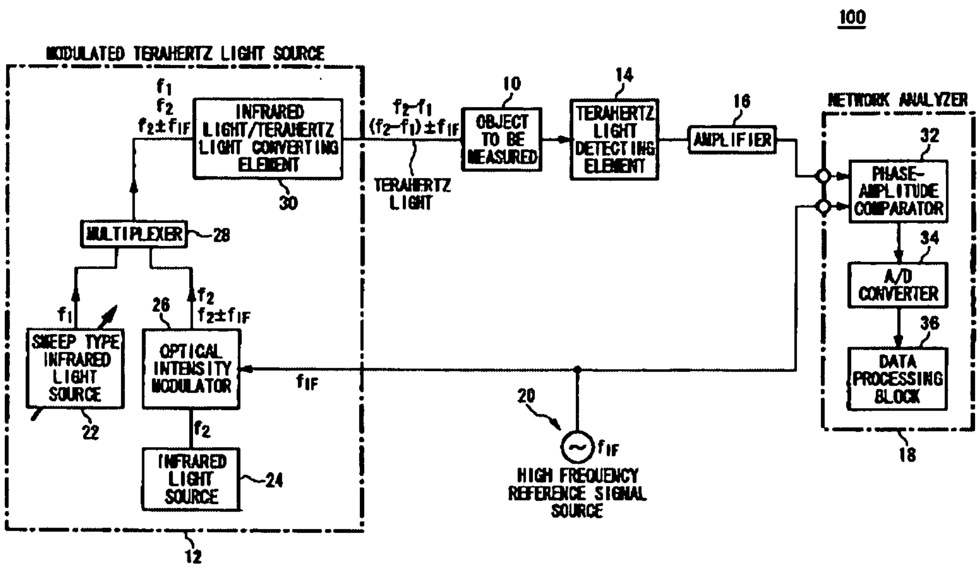
100
MODULATED TERAHERTZ LIGHT SOURCE
INFRARED LIGHT/TERAHERTZ LIGHT CONVERTING ELEMENT
30
MULTIPLEXER
28
SWEEP TYPE INFRARED LIGHT SOURCE
22
OPTICAL INTENSITY MODULATOR
26
INFRARED LIGHT SOURCE
24
12
TERAHERTZ LIGHT
OBJECT TO BE MEASURED
10
TERAHERTZ LIGHT DETECTING ELEMENT
14
AMPLIFIER
16
NETWORK ANALYZER
PHASE-AMPLITUDE COMPARATOR
32
A/D CONVERTER
34
DATA PROCESSING BLOCK
36
18
20
HIGH FREQUENCY REFERENCE SIGNAL SOURCE

FIG. 1

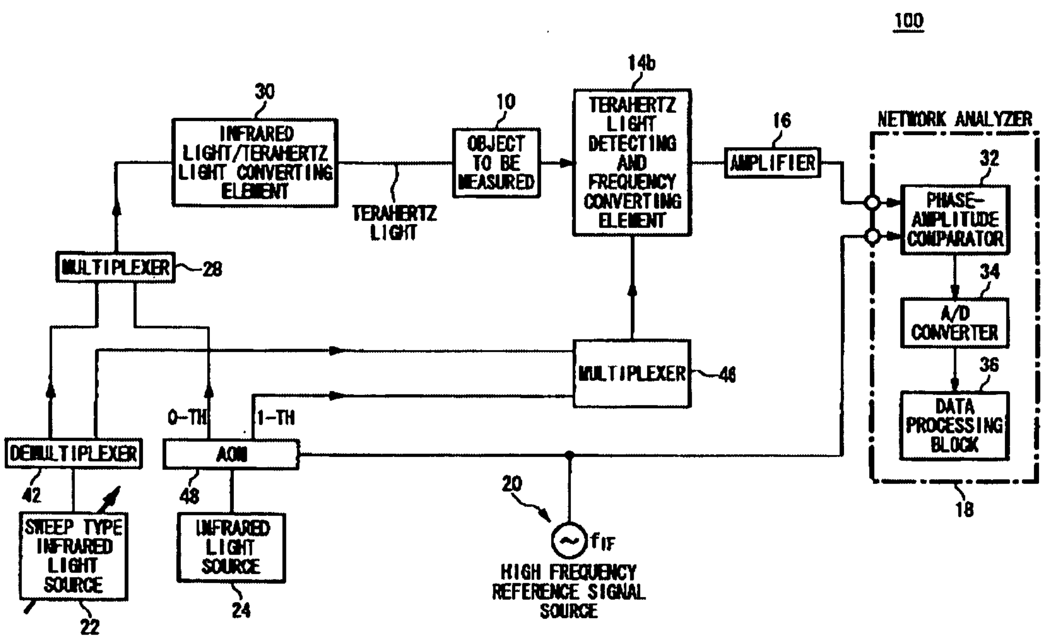
100
30
INFRARED LIGHT/TERAHERTZ LIGHT CONVERTING ELEMENT
10
OBJECT TO BE MEASURED
14b
TERAHERTZ LIGHT DETECTING AND FREQUENCY CONVERTING ELEMENT
16
AMPLIFIER
NETWORK ANALYZER
32
PHASE-AMPLITUDE COMPARATOR
34
A/D CONVERTER
36
DATA PROCESSING BLOCK
18
TERAHERTZ LIGHT
MULTIPLEXER
28
MULTIPLEXER
46
0-TH
1-TH
DEMULTIPLEXER
42
AOM
48
SWEEP TYPE INFRARED LIGHT SOURCE
22
INFRARED LIGHT SOURCE
24
20
HIGH FREQUENCY REFERENCE SIGNAL SOURCE

FIG. 6

With regard to claim 1, Kido et al teach an apparatus comprising:

a first source, emitting a first beam having a first frequency(22, column 8, lines 66+);

a second source, emitting a second beam having a second frequency, the difference between the first frequency and the second frequency being in a Terahertz range(24, column 9, lines 7-15);

a mixer, located downstream of the first laser and the second laser, the mixer producing a mixed signal(28, column 9, lines 34-56); and

a modulator modulating at least one beam between the first beam and the second beam(26, column 9, lines 16-27).

While Kido refers to laser sources in the prior art, Kido is silent about the type of sources used in the disclosed embodiments.

As to claim 2, wherein the mixed signal has a frequency spectrum comprising a carrier component and at least two sideband components, the carrier component centered at a Terahertz frequency($(f_2-f_1)\pm f_{IF}$).

As to claim 3, wherein the carrier component has a frequency displacement from the sideband components depending on the modulation of the at least one beam($(f_2-f_1)\pm f_{IF}$).

As to claim 6, wherein the modulator is located upstream of the mixer(26,28; figure 1).

As to claim 7, wherein the modulator performs frequency modulation of the at least one beam(48; **column 16, lines 64+**).

As to claim 8, wherein the modulator performs amplitude modulation of the at least one beam(26, **column 9, lines 16-27**).

As to claim 9, wherein at least one frequency between the first frequency, the second frequency and the modulator frequency is a tunable frequency(22, **column 8, lines 66+**).

With regard to claim 10, Kido et al teach an apparatus comprising:

a first source, emitting a first beam having a first frequency(22, **column 8, lines 66+**);

a second source, emitting a second beam having a second frequency, the difference between the first frequency and the second frequency being in a Terahertz range(24, **column 9, lines 7-15**);

a frequency modulator, having a modulation frequency, for frequency modulating one beam between the first beam and the second beam(48; **column 16, lines 64+**); and

a mixer, having as an input the frequency modulated one beam and the other beam and outputting a mixed signal(28, **column 9, lines 34-56**).

While Kido refers to laser sources in the prior art, Kido is silent about the type of sources used in the disclosed embodiments.

As to claim 11, wherein the mixed signal is tunable(22, **column 8, lines 66+**).

As to claim 13, wherein the mixed signal is tunable by tuning the difference between the first frequency and the second frequency(22, **column 8, lines 66+**).

As to claim 14, wherein:

the mixed signal is adapted to be input to a sample whose spectral properties have to be detected(10, **column 8, lines 34-41**); and

the apparatus further comprises a detector, disposed downstream of the sample, for detecting a signal output from the sample in response to the mixed signal input thereto(**14, column 10, lines 20-33**).

As to claim 15, wherein the mixed signal has a frequency spectrum comprising sidebands, the sidebands comprising information to be transmitted to a remote location($(f_2-f_1)\pm f_{IF}$).

With regard to claim 19, Kido et al teach an apparatus comprising:

a first source, emitting a first beam having a first frequency(22, **column 8, lines 66+**);

a second source, emitting a second frequency modulated beam having a carrier frequency and a modulation frequency, the difference between the first frequency and the carrier frequency being in a Terahertz range(24, 48; **column 9, lines 7-15 and column 16, lines 64+**); and

a mixer, having as an input the first beam and the second frequency modulated beam and outputting a mixed signal(28, **column 9, lines 34-56**).

While Kido refers to laser sources in the prior art, Kido is silent about the type of sources used in the disclosed embodiments.

As to claim 20, wherein the mixed signal is tunable(22, **column 8, lines 66+**).

As to claim 22, wherein the mixed signal is tunable by tuning the difference between the first frequency and the second frequency(22, **column 8, lines 66+**).

As to claim 23, wherein:

the mixed signal is adapted to be input to a sample whose spectral properties have to be detected(10, **column 8, lines 34-41**); and

the apparatus further comprises a detector, disposed downstream of the sample, for detecting a signal output from the sample in response to the mixed signal input thereto(14, **column 10, lines 20-33**).

As to claim 24, wherein the mixed signal has a frequency spectrum comprising sidebands, the sidebands comprising information to be transmitted to a remote location($(f_2-f_1)\pm f_{IF}$).

With regard to claim 25, Kido et al teach an apparatus comprising:

a first source, emitting a first beam having a first frequency(22, **column 8, lines 66+**);

a second source, emitting a second beam having a second frequency, the difference between the first frequency and the second frequency being in a Terahertz range(24, **column 9, lines 7-15**);

a modulator, for modulating in amplitude one beam between the first beam and the second beam(**26, column 9, lines 16-27**); and

a mixer, having as an input the amplitude modulated one beam and the other beam and outputting a mixed signal(**28, column 9, lines 34-56**).

While Kido refers to laser sources in the prior art, Kido is silent about the type of sources used in the disclosed embodiments.

As to claim 26, wherein:

the mixed signal is adapted to be input to a sample whose spectral properties have to be detected(**10, column 8, lines 34-41**); and

the apparatus further comprises a detector, disposed downstream of the sample, for detecting a signal output from the sample in response to the mixed signal input thereto(**14, column 10, lines 20-33**).

As to claim 27, wherein the mixed signal has a frequency spectrum comprising sidebands, the sidebands comprising information to be transmitted to a remote location(**$(f_2\text{-}f_1)\pm f_{IF}$**).

With regard to claim 28, Kido et al teach an apparatus comprising:

a first source, emitting a first beam having a first frequency(**22, column 8, lines 66+**);

a second laser, emitting a second amplitude modulated beam having a carrier frequency, the difference between the first frequency and the carrier frequency being in a Terahertz domain(**24,26; column 9, lines 7-27**); and

a mixer, having as an input the first beam and the second amplitude modulated beam and outputting a mixed signal(28, column 9, lines 34-56).

While Kido refers to laser sources in the prior art, Kido is silent about the type of sources used in the disclosed embodiments.

As to claim 29, wherein:

the mixed signal is adapted to be input to a sample whose spectral properties have to be detected(10, column 8, lines 34-41); and

the apparatus further comprises a detector, disposed downstream of the sample, for detecting a signal output from the sample in response to the mixed signal input thereto(14, column 10, lines 20-33).

As to claim 30, wherein the mixed signal has a frequency spectrum comprising sidebands, the sidebands comprising information to be transmitted to a remote location($(f_2-f_1) \pm f_{IF}$).

With regard to claim 30, Kido et al teach a method comprising:

providing a first source beam having a first frequency(22, column 8, lines 66+);

providing a second laser beam having a second frequency, the difference between the first frequency and the second frequency being a Terahertz frequency(24, column 9, lines 7-15);

modulating at least one beam between the first beam and the second beam(26, column 9, lines 16-27); and

mixing the first beam and the second beam to generate a mixed signal(28, column 9, lines 34-56).

While Kido refers to laser sources in the prior art, Kido is silent about the type of sources used in the disclosed embodiments.

As to claim 35, further comprising:

inputting the mixed signal to a sample whose spectral properties have to be detected(10, column 8, lines 34-41); and

detecting a signal output from the sample in response to the mixed signal input thereto(14, column 10, lines 20-33).

As to claim 36, wherein inputting the mixed signal to a sample comprises tuning the mixed signal to create resonance with the spectral properties of the sample(22, column 10, lines 13-18).

Kido et al teach that the prior art, figures 9-11, uses a laser source(110,210,310) for measuring propagation, dispersion, and tomographic imaging.

With specific regard to claims 1, 10, 19, 25, 28, and 34; it would have been obvious to one of ordinary skill in the art at the time the invention was made to use laser sources as the light sources of Kido because of there wavelength characteristics(column 11, lines 34-37).

As to claims 16-18, since laser sources have narrow bandwidths(claim 16) of about 1 KHz to about 10 MHz(claim 17) and include laser diodes, fiber lasers, and diode-

pumped solid state lasers(claim 18) it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the laser sources with a linewidth as narrow as possible(**column 11, lines 34-37**) from any laser source which provides the desired frequency.

With regard to claims 12 and 21, Kido et al **fail to teach** wherein the mixed signal is tunable by tuning the modulation frequency of the frequency modulator.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Kido apparatus by tuning the modulation frequency f_{IF} instead of the source frequency f_1 because a) the high frequency source is easier to tune than a tunable source which is unstable and can drift, and b) the mixed frequency $(f_2-f_1) \pm f_{IF}$ will still be tuned across the frequency range of the sample.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kido et al(6,873,405) as applied to claims 1-3, 6-30, and 34-36 above, and further in view of Ali et al(IEEE-7/2000) and Mueller et al(2002/0036814).

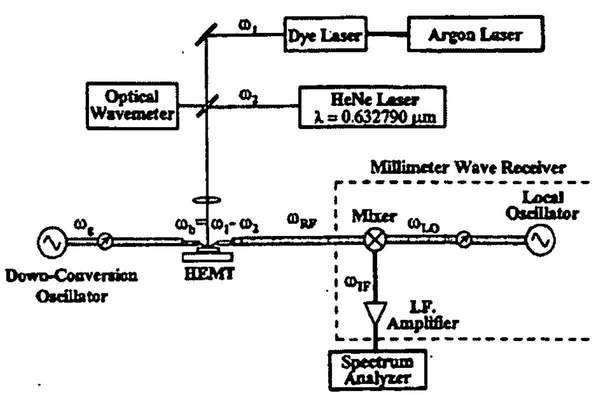

Fig. 1. Optical mixing arrangement in the three-wave detection configuration. The optically generated signals are downconverted in the HEMT's by injection of a millimeter-wave local oscillator signal to keep the resultant in the bandwidth of the external millimeter-wave receiver.

Ali et al teach a combination modulator/mixer arrangement including a first laser source ω_1, and second laser source ω_2, a lens, modulation signal ω_g, and an HEMT. In Ali the difference frequency ω_b is 552 GHz.

Mueller et al teach that HEMT's can operate in the terahertz range(**paragraph [0019]**).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the modulator 26 and mixer 28 of Kido with a HEMT operating in the terahertz range in order to reduce the number of components.

Claims 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ali et al(IEEE-7/2000) and Mueller et al(2002/0036814).

With regard to claim 31, Ali et al teach an apparatus comprising:

a first laser, emitting a first beam having a first frequency(**the argon and dye lasers, ω_1**);

a second laser, emitting a second beam having a second frequency(**the HeNe laser, ω_2**);

a high electron mobility transistor (HEMT) having a first terminal, a second terminal, and a photoconductive region on which the first beam and the second beam impinge(**the HEMT**); and

a modulator having a modulation frequency(**down-conversion oscillator, ω_g**), for modulating an intermediate signal having an intermediate frequency inferior to the first frequency and the second frequency to obtain a modulated signal, the

modulated signal input to the first terminal of the HEMT, wherein the second terminal of the HEMT outputs a mixed signal having a frequency spectrum depending on the first frequency, the second frequency, the intermediate frequency, and the modulation frequency(ω_1-ω_2± ω_g).

Ali et al **fail to teach** a frequency difference in the terahertz range instead only reaching 552 GHz.

As to claim 32, further comprising an oscillator emitting the intermediate signal at the intermediate frequency(**down-conversion oscillator, ω_g**).

As to claim 33, further comprising an objective lens for focusing the first beam and the second beam on the photoconductive region of the HEMT(**the lens, figure 1**).

With regard to claim 31, it would have been obvious to one of ordinary skill in the art at the time the invention was made to increase the frequency difference into the terahertz range because of the advantages operating in the optical domain(**Ali; column 1, page 879**) since now HETM's can operate in the terahertz range(**Mueller, paragraph [0019]**).

Relevant Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bjorklund(4,297,035) and Oxley (IEEE-3/2002).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel A. Turner whose phone number is 571-272-2432.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr., can be reached on 571-272-2800 ext. 77.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Samuel A. Turner
Primary Examiner
Art Unit 2877